

REMARKSOVERVIEW

Claims 33-37 are pending in this case. Claim 33 has been amended. This amendment is in response to a non-final office action dated June 10, 2004. Claims 33-37 are pending in this case. The present response is an earnest effort to advance prosecution of the case and the case. Applicants submit that all claims are in proper form for immediate allowance.

ISSUES UNDER 35 U.S.C. § 103

Claims 33, 36 and 37 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang et al. (WO 99/53505) hereinafter "Chiang" in view of U.S. Patent No. 6,311,390 to Abe et al., hereinafter "Abe". These rejections are respectfully traversed.

First it is observed that the Examiner has misread Chiang. On page 3 of the Office Action, the Examiner indicates that Chiang discloses:

- "separating a first chip resistor from a second chip resistor (Cf. Fig. 5, 10), each chip resistor comprising a substrate (Cf. Fig. 5, 17), a resistive element on the substrate and first and second end caps (Cf. Fig. 5, elements 31 & 51), electrically connected to opposite ends of the resistive elements (Cf. Fig. 5, 17);
- connecting the first end cap of the first resistor and the first end cap of the second resistor with a first barrier (Cf. Page 11, lines 6 ff.) to mechanically connect the first and second chip resistors;
- connecting the second end cap of the first resistor and the second end cap of the second resistor with a second barrier (Cf. Page 11, lines 6 ff.) to mechanically connect the first and second chip resistors to provide long term mechanical stability."

The Examiner is misreading Chiang and misapplying it to claim 33 in a multitude of ways.

For example, the Examiner cites to page 11, lines 6 of Chiang as disclosing connecting the end caps of the first resistor with the end caps of the second resistor with the barriers. When Chiang is read and understood in its proper context, Chiang does not disclose these elements of claim 33. From the Examiner's rejection, it is not apparent what the Examiner's understanding of Chiang is or the basis for the rejection and no reason is provided.

In any event, the Examiner appears to indicate that the Examiner considers elements 31 and 51 of Chiang to be end caps. Chiang refers to these elements as being first and second traverse members which are hollow tubes formed by a plating process (page 12, lines 26-31). These hollow tubes are not end caps. Perhaps the Examiner is indicating that these tubes, when filled with solder, become end caps. If this is the Examiner's reasoning, then this reasoning is also inapplicable because the tubes are filled with solder on each end of the stacked device. Therefore, there are only two total end caps and not a separate end cap for each end of each resistor in the stack.

Chiang is further distinguished because claim 33 now requires "a first barrier to mechanically connect the first and second chip resistors to provide long term mechanical stability in a manner resistant to resistive heating." The solder filled connections of Chiang do not define the structure that provides this advantage now explicitly articulated in the claim.

The use of solder to attempt to connect terminals of a stacked chip resistor was specifically identified in the specification at paragraph 7 as a significant problem that the present invention overcomes. Thus it is clear that even if the Examiner is to improperly consider solder filled in the traverse members to form the proper number of end caps, Chiang still fails to provide a structure that provides the advantage of "long term mechanical stability in a manner resistant to resistive heating" of the barriers claimed in claim 33.

It is also observed that in Figures 8 and 9 of Chiang there is only one element referenced with numeral 51 and one element referenced with numeral 31, the Examiner indicating that these elements correspond with the end caps required by claim 33. Claim 33 requires one end cap on each end of each device (i.e. four end caps) and only two transverse members 31 and 51 are shown in Figure 9.

Therefore, it is respectfully submitted that Chiang does not disclose all that the Examiner purports it to and this rejection must be withdrawn on that basis.

Abe merely discloses using a ceramic material due to its heat resistance and insulation characteristics. Abe does not disclose using a glass insulating material to separate chip resistors. It is respectfully submitted that the Examiner is improperly parsing the first method step of claim 33, namely the limitation of "separating a first chip resistor from a second chip resistor with a glass encapsulate." Therefore this rejection should be withdrawn on this basis as well.

It is also observed that the Examiner is not properly considering the context of the claimed invention. In particular the references relied on by the Examiner do not relate to a stacked power chip resistor. Therefore these references are not concerned with the problems of providing "long term mechanical stability in a manner resistant to resistive heating". The problem being solved by the invention is always relevant to the obviousness issue and it is not believed here that the Examiner has properly considered the difference in the problem being solved and the context of the present invention relative to the references cited by the Examiner.

Therefore, for all these differences and all these reasons, it is respectfully submitted that this rejection to claim 33 must be withdrawn. As claims 36 and 37 depend from claim 33, it is respectfully submitted that these rejections should also be withdrawn.

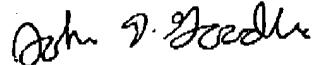
Claims 34 and 35 have been rejected under 35 U.S.C. § 103(a) as being unpatentable of Chiang in view of Abe and further in view of U.S. Patent No. 6,124,769 to Igarashi et al., hereinafter Igarashi.

The deficiencies of Chiang and Abe have already been addressed. As Igarashi does not remedy these deficiencies, it is respectfully submitted that these rejections must be withdrawn.

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



JOHN D. GOODHUE, Reg. No. 47,603
McKEE, VOORHEES & SEASE, P.L.C.
801 Grand Avenue, Suite 3200
Des Moines, Iowa 50309-2721
Phone No: (515) 288-3667
Fax No: (515) 288-1338
CUSTOMER NO: 22885

Attorneys of Record

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